

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of

**STATE OF NEW YORK**

Request for Waiver of Section 90.545  
Regarding 700 MHz Public Safety System  
Interference Protection for  
Co-Channel and Adjacent-Channel Television  
Stations

WT Docket No. 06-18

**COMMENTS OF  
QUALCOMM INCORPORATED**

QUALCOMM Incorporated (“QUALCOMM”) hereby submits its Comments in support of the Request for Waiver (“*Request*”) filed on October 24, 2005 with the Federal Communications Commission (“FCC” or “Commission”) by the State of New York (“State” or “New York”).<sup>1</sup> QUALCOMM urges the Commission to consider the public interest factors weighing in favor of early use of the 700 MHz spectrum when the impact on broadcast licensees will be minimal. The issues presented by the State’s *Request* are similar to those that are presented by the Petition for Declaratory Ruling filed by QUALCOMM in January 2005.<sup>2</sup> In both cases, the public interest requires prompt recognition of the value of deploying new services that can co-exist with TV/DTV stations during the remainder of the DTV Transition. In the case of New York, these new services are two-way public safety radio communications, with mobile transmitters, operating within the New York City Metropolitan area. In the case of QUALCOMM, the new services are those provided by a new “mediacast” network, called MediaFLO, which will deliver one-way channels of high quality video, audio and data to third generation mobile phones using fixed transmitters.

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<sup>1</sup> See Public Notice DA 06-99, released January 26, 2006. (“*State PN*”)

<sup>2</sup> *Petition for Declaratory Ruling*, QUALCOMM Incorporated, WT Docket No. 05-7 (January 10, 2005) (*QUALCOMM Petition*).

## I INTRODUCTION

### A. The New York State Request

In its *Request*, New York asks for a waiver of the rules to permit implementation of a new 700 MHz public safety radio communications system prior to the end of the transition from analog to digital television broadcasting (“DTV Transition”). The State holds a license authorizing use of certain frequencies within the 764-776/794-806 MHz band, but cannot use these frequencies because Section 90.545 of the Commission’s Rules requires that public safety licensees protect existing co-channel or adjacent channel television stations. However, the State has conducted an engineering analysis consistent with FCC rules and has concluded that public safety operations within 774-776/804-806 would not cause significant interference. Therefore, the State seeks a waiver of Section 90.545 to allow operations with a *de minimis* amount of interference.<sup>3</sup>

New York bases its *Request* upon a compelling description of how an improved radio communications system is essential to the protection of life and property. The State gives evidence of the need for improved communications for the Metropolitan Transportation Authority Police Department (“MTAPD”), the New York State Division of State Police, and other public safety agencies. There is no question that the State presents a powerful public interest argument for improved public safety communications.

Balanced against this powerful incentive is the concern that use of the 700 MHz spectrum will cause interference to television reception. Here, the State’s Engineering Study demonstrates that

the proposed public safety fixed and mobile operations will not cause any significant interference to reception of co-channels or adjacent channel television stations. What little interference

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<sup>3</sup> The State notes that its request for a waiver of the rule is prompted by a Wireless Telecommunications Bureau ruling, in similar circumstances, that a waiver is required if the proposed non-broadcast operations are within the Grade B contour of the protected television station. Because parts of the area where its transmitters will be located are within the Grade B contour of WFUT-TV (Channel 68) and WMBC-TV (Channel 63), the State seeks a waiver, “even though the State’s engineering studies show a lack of significant interference pursuant to the Commission’s rules and established engineering guidelines.” *Request* at 10.

might theoretically occur is *de minimis* and will end, in any event, upon completion of the DTV Transition.<sup>4</sup>

As the State notes, Section 90.545 of the Commission's Rules, like its counterpart for Miscellaneous Wireless Services, Section 27.60, allows licensees to satisfy interference criteria through the submission of an engineering study justifying the proposed separations based on the actual parameters of the land mobile station and the actual parameters of the television stations to be protected.<sup>5</sup>

The Engineering Study used by New York uses standard mathematical processes and common propagation models to conduct interference evaluations, including the OET Bulletin No. 69 *Longly-Rice Methodology for Evaluating TV Coverage and Interference*. ("OET-69").<sup>6</sup> Based on that Study, the State concludes that there will either be no impact to the broadcast station or a *de minimis* impact using worst case assumptions. The potential for interference is well within the Commission's standard for *de minimis* interference, which has been determined to be 2% in the Commission's Rules.<sup>7</sup> In addition, the State argues that these stations actually have a very limited number of actual viewers, most of whom do not rely on over-the-air reception and would therefore not be affected by public safety interference. In sum, the State concludes that the Commission should grant the requested waiver since the potential for interference is minimal and the potential for public use is great.

## **B. The QUALCOMM Petition**

Over fourteen months ago, QUALCOMM Incorporated filed a request similar to the State's. In a Petition for Declaratory Ruling filed on January 10, 2005, QUALCOMM asked that the Commission declare that the interference calculation procedures contained in OET-69 are acceptable to demonstrate compliance with the TV/DTV interference protection criteria of Section 27.60 of the FCC Rules. QUALCOMM also asked that the *de minimis* standard

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<sup>4</sup> *Request* at 9. After the filing of the *Request*, Congress passed, and the President has signed, the Digital Television Transition and Public Safety Act, part of the Deficit Reduction Act of 2005, which establishes a "hard date" for the end of the DTV Transition of February 17, 2009, less than 3 years away.

<sup>5</sup> *Request* at 9.

<sup>6</sup> Engineering Study at 9, 17.

<sup>7</sup> 47 CFR §73.623(c).

established by Section 73.623(c) be declared to be the appropriate standard for measuring acceptable interference. In other words, the QUALCOMM *Petition* is similar to the State *Petition* in its technical characteristics: both make use of OET-69 and both would establish 2% criteria for acceptable interference.

Grant of the QUALCOMM *Petition* would allow speedy deployment of QUALCOMM's innovative MediaFLO service, a nationwide network of high quality video, audio and data content using Channel 55, part of the Lower 700 MHz spectrum. In some parts of the country, QUALCOMM will only be able to launch MediaFLO if it can coexist with the TV/DTV channels operating on channels adjacent to or co-channel with QUALCOMM's Channel 55. Thus, like the State, QUALCOMM will be required to show that such co-existence is feasible without causing significant interference.

The Commission has recognized the similarities between the QUALCOMM *Petition* and New York's *Request*. In the Public Notice seeking comment on the *Request*, the Commission asked commenters to address:

...whether this waiver request is an appropriate vehicle for considering approval of a system that is allowed to cause some amount of predicted interference to TV and DTV service, or whether this issue should be considered first in another context, such as the broader QUALCOMM request that is pending before the Commission.<sup>8</sup>

As discussed more fully below, QUALCOMM urges prompt action on both the *Request* and its own *Petition*.

## **II ARGUMENT**

### **A. Use of Engineering Studies Is Appropriate**

Section 90.545 of the Commission's Rules establishes the TV/DTV interference protection criteria for public safety base, control and mobile transmitters in the 764-776 MHz and 794-806 MHz frequency bands.<sup>9</sup> This section provides three methods by which licensees

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<sup>8</sup> *State PN* at 2.

<sup>9</sup> 47 CFR §90.545.

may meet the TV/DTV protection requirements, subject to Commission approval.<sup>10</sup> The second of these methods is the submission of an engineering study

...justifying the proposed separations based on the parameters of the land mobile station and the parameters, including authorized and applied for facilities of the TV/DTV station(s) it is trying to protect.<sup>11</sup>

New York State has submitted an engineering study which demonstrates “minimum interference potential” across densely populated downstate New York.<sup>12</sup>

QUALCOMM believes that the Commission intentionally allowed 700 MHz licensees – both commercial and public safety -- some flexibility in designing these engineering studies, rather than specifying a particular type of study. In that way, improvements in methodology could be accommodated without rule changes. New York notes that its study is consistent with that used by Aloha Partners in its successful showing under Section 27.60(b)(1)(ii).<sup>13</sup> QUALCOMM notes that the State’s study also incorporates many of the characteristics of studies performed using OET-69.<sup>14</sup> It is entirely appropriate for licensees to utilize engineering studies that combine accepted methodologies to demonstrate interference protection criteria. In each case, under the prevailing procedures, the studies, their methodologies and their results will be subjected to Commission scrutiny under the approval process found in both Section 90.545 and Section 27.60. The approach used by New York is similar to the OET-69 approach used in the *QUALCOMM Petition* and provides a good basis for examining interference potential.

#### **B. Use of a *De Minimis* Standard is Appropriate**

As New York correctly states in its Engineering Study, Section 90.545 does not give a particular interference allowance that would lead to an obvious conclusion regarding

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<sup>10</sup> 47 CFR §90.545(c)(1).

<sup>11</sup> 47 CFR §90.545(c)(1)(ii). This language is identical to the language of Section 27.60(b)(1)(iii), for non public safety land mobile licensees upon which QUALCOMM relied in its *Petition*.

<sup>12</sup> Engineering Study at 47.

<sup>13</sup> *Request* at n.16, citing *Aloha Partners, L.P.*, DA-05-460, released February 18, 2005.

<sup>14</sup> See Engineering Study at 14-18.

affected population size.<sup>15</sup> What is obvious, however, is that the Commission intended that there should be some flexibility in showing what level of interference would be acceptable. In other words, “no interference” is *not* the standard.

QUALCOMM has explained this point in the context of its own *Petition*, regarding Section 27.60. If the Commission had intended that land mobile stations create no interference to TV/DTV stations, it could easily have said so. Instead, in both Sections 27.60 and 90.545, the Commission said that land mobile stations must be operated to “reduce the potential for interference” to public reception of TV/DTV signals.<sup>16</sup> Further, by allowing engineering studies to “justify” proposed separations between stations, the Commission likely recognized that some level of interference was justifiable. Finally, both rules allow the submission of written agreements between the land mobile station and the TV/DTV station. If the standard were a simple “no interference”, then TV/DTV stations would not themselves be permitted to make judgments as to how much interference the viewing public should receive.

Rather than “no” interference, the standard clearly is “some” interference, as justified by the public interest. In searching for a reasonable way to quantify “some”, the State concluded that the Commission’s own standard of *de minimis* interference was appropriate. In its *Petition*, QUALCOMM also concluded that a 2% *de minimis* standard best reflected the balance between protecting TV/DTV viewers and introducing the valuable new services that land mobile licensees can bring. This standard, first employed by the Commission at the suggestion of major broadcast groups, was introduced about eight years ago.<sup>17</sup> Under this standard, stations would be permitted to make changes in their operations where the change would not result in more than a two percent increase in interference to the population served by another station. However, no new interference may be caused to a station that would result in a station’s receiving interference to more than ten percent of its population.<sup>18</sup>

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<sup>15</sup> *Engineering Study* at 47.

<sup>16</sup> 47 CFR §27.60 and 47 CFR §90.545.

<sup>17</sup> *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, 13 FCC Rcd 1418 (1998) (*DTV Reconsideration*).

<sup>18</sup> 47 CFR §73.623. QUALCOMM supports this 10% limitation in the context of Section 27.60 and 90.545 showings.

The Commission sought to provide some flexibility, but under careful scrutiny. In both Sections 27.60 and 90.545, the showings made are subject to Commission approval. Thus, neither New York nor QUALCOMM, nor any other 700 MHz licensee, is free to begin operations based on an engineering study until the Commission has balanced the appropriate interests.

That balancing should include consideration of the number of TV/DTV viewers likely to be actually affected, and for how long. As New York points out, the Commission should take into consideration the number of actual viewers, most of whom do not rely on over-the-air signals and would therefore, not be affected.<sup>19</sup> The Commission also should consider that interference will only be an issue so long as the DTV transition continues. Now that Congress has enacted the DTV Transition Act, we can be sure that the transition will end on February 17, 2009. It can be anticipated that many stations and consumers will prepare for digital television long before that date. Consequently, the actual number of viewers affected under the *de minimis* standard is small and likely to grow smaller until, in less than three years, there will be none.

For these reasons, QUALCOMM believes that use of the *de minimis* standard to consider interference predictions from Section 90.545 or Section 27.60 engineering studies is entirely appropriate.

### **C. Prompt Action on Both Requests is Required.**

It is very clear to QUALCOMM that there are circumstances in which the public interest favors some minimal temporary interference to TV/DTV stations in order to bring to the public innovative new services. New York State proposes to bring a vastly improved public safety radio communications system to the New York metropolitan area. QUALCOMM certainly supports grant of New York's waiver request in these circumstances and urges prompt action on the New York *Request*.

In acting on the New York *Request*, however, the Commission should not withhold action on the QUALCOMM *Petition*, which has been ripe for decision since March 26,

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<sup>19</sup> *Request* at 11.

2005. It would be egregiously unfair to delay decision on the QUALCOMM *Petition* so as to incorporate the record generated by this New York *Request*.

For that reason, QUALCOMM believes that it is not necessary to consider, as the Commission's January 26, 2006 Public Notice would imply, any issues other than those raised by the QUALCOMM *Petition* when acting upon that *Petition*. Indeed, opening the QUALCOMM proceeding to other issues at this late date might be considered an abuse of the Commission's processes.

Rather, QUALCOMM asks for prompt action on its *Petition*, which has been ready for Commission action for almost one year. We also believe that prompt action on the Stats *Request* is appropriate, but such action should not predate action on the long-pending QUALCOMM *Petition*.

### III CONCLUSION

For the above reasons, QUALCOMM supports grant of the New York State *Request for Waiver*.

Respectfully submitted,

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Veronica M. Ahern, Esq.  
Nixon Peabody LLP  
401 Ninth Street, N.W.  
Suite 900  
Washington, D.C. 200004  
(202) 585-8321

Dean R. Brenner  
Vice President, Government Affairs  
QUALCOMM Incorporated  
2001 Pennsylvania Avenue, N.W.  
Washington, D.C. 20006  
(202) 263-0020

Attorneys for QUALCOMM Incorporated

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